Remarks

Applicants would like to thank the examiner for the review of the present application.

In the Claims

Claims 1-28 are currently pending in the application. As discussed in greater detail below, Applicants have amended claims 1-7, 9-23. Claims 26-27 are new. No new matter has been added.

Rejections under 35 USC §102

The Office action rejects claims 1-6 and 23-24 under 35 USC §102(a) as being anticipated by U.S. Patent No. 6,605,223 issued to Jorgensen et al ("Jorgensen"). The Applicants respectfully disagree.

The Jorgensen reference does not teach all the limitations as claimed in current claims 1-6 and 23-24. Specifically, the Jorgensen reference does not teach filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane, as stated in independent claims 1 and 23.

The Examiner states that Jorgensen discloses a first pump chamber 23 for pumping fluid under control of its respective pump and a first fluid inlet port in selective fluid communication with the first pump chamber 23. See current Office action page 2, paragraph 5. However, Jorgensen discloses an expressor chamber 23, preferably positioned in the cassette 1 adjacent to the portion of the cassette 1 that holds the whole blood bag and blood compartment bags. See Jorgensen, col. 8, lines 46-51. When the cassette 1 is closed, and the device is used, expressing fluid or gas is pumped into the expressor chamber 23 for purpose of expanding the flexible membrane 11, which pressurizes one or more of the blood component bags. See Jorgensen col. 8, lines 61-65. As expressing fluid is pumped into the expressor chamber 23, the flexible membrane 11 expands against, for example, the whole blood bag 6, thereby squeezing and reducing the volume of the bag 6 and forcing material out of the bag 6. See Jorgensen, col. 9, lines 1-5.

No where does Jorgensen disclose or teach filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane. In fact, as the Examiner compares the expressor chamber 23 to the first pump chamber, Jorgensen clearly states that

expressing fluid is pumped into the expressor chamber to expand the flexible membrane, which then expands against the whole blood bag, squeezing and forcing material out of the bag. Thus, positive pressure is exerted on the blood bag to force material out. Jorgensen does not disclose filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane.

For these reasons and others, some of which are discussed above, Applicants have shown that claims 1 and 23 are allowable over Jorgensen, and thus, requests that the Examiner withdraw the rejections of claims 1 and 23 over 35 USC §102(a). As claims 2-6 and 24 are dependent claims of allowable base claims, Applicants additionally request the Examiner withdraw the rejection of claims 2-6 and 24 over 35 USC §102(a).

Rejections under 35 USC §103

Applicants have addressed the various grounds for rejection under 35 USC §103(a) presented in the current Office action below. Like numbering, as used for the various rejections under 35 USC §103(a) in the current Office action, is used herein to designate the respective remarks.

8. The Office action rejects claim 7 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen"). As discussed in further detail above, Applicants have shown that claim 1 is allowable, and as claim 7 is dependent from claim 1, it follows that claim 7 is also allowable. Thus, Applicants respectfully request the Examiner withdraw the rejection of claims 7 over 35 USC §103(a).

9. The Office action rejects claims 8 and 25 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen") in view of U.S. Patent No. 4,056,224 issued to Lolachi ("Lolachi"). As Applicants have shown that claims 1 and 23 are allowable, and as claims 8 and 25 are dependent from allowable base claims, it follows that claims 7 and 25 are also allowable. Thus, Applicants respectfully request the Examiner withdraw the rejection of claims 7 over 35 USC §103(a).

10. The Office action rejects claims 9 and 11-13 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen"). Applicants respectfully disagree.

The Jorgensen reference does not teach all the limitations as claimed in current claims 9 and 11-13. Specifically, the Jorgensen reference does not teach wherein working solution enter the working solution pump chamber when its respective pump applies negative pressure to the first pump chamber membrane, as stated in current independent claim 9.

Jorgensen discloses an expressor chamber 23, preferably positioned in the cassette 1 adjacent to the portion of the cassette 1 that holds the whole blood bag and blood compartment bags. See Jorgensen, col. 8, lines 46-51. When the cassette 1 is closed, and the device is used, expressing fluid or gas is pumped into the expressor chamber 23 for purpose of expanding the flexible membrane 11, which pressurizes one or more of the blood component bags. See Jorgensen col. 8, lines 61-65. As expressing fluid is pumped into the expressor chamber 23, the flexible membrane 11 expands against, for example, the whole blood bag 6, thereby squeezing and reducing the volume of the bag 6 and forcing material out of the bag 6. See Jorgensen, col. 9, lines 1-5.

No where does Jorgensen disclose or teach filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane. In fact, as the Examiner compares the expressor chamber 23 to the first pump chamber, Jorgensen clearly states that expressing fluid is pumped into the expressor chamber to expand the flexible membrane, which then expands against the whole blood bag, squeezing and forcing material out of the bag. Thus, positive pressure is exerted on the blood bag to force material out. Jorgensen does not disclose filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane.

For these reasons and others, some of which are discussed above, Applicants have shown that claim 9 is allowable over Jorgensen, and thus, requests that the Examiner withdraw the rejection of claims over 35 USC §103(a). As claims11-13 are dependent claims of allowable base claims, Applicants additionally request the Examiner withdraw the rejection of claims 11-13 over 35 USC §103(a).

11. & 12. The Office action rejects claims 10 and 14 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen"). Applicants respectfully disagree. For at least the same reasons as stated above with respect to the rejection of claims 9 and 11-13, Applicants respectfully request the Examiner withdraw the rejection of claim 10 over 35 USC §103(a).

13. The Office action rejects claim 15 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen") in view of Lolachi U.S. 4,056,224 ("Lolachi"). Applicants respectfully disagree. As discussed above, Jorgensen does not teach all the limitations except the four-port coupling inserted in a distribution tubing, as stated by the Examiner. See Office action, page 7, paragraph 13. Jorgensen nor Lolachi teach, either alone or as modified as suggested by the Examiner, amongst other elements, wherein fluid enters the first and second pump chamber when its respective pump applies negative pressure to the first pump chamber membrane and the second pump chamber membrane. Thus, Applicants respectfully request the Examiner withdraw the rejection of claim 15 over 35 USC §103(a).

14. The Office action rejects claims 16 and 19-22 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen"). Applicants respectfully disagree. The Jorgensen reference does not teach, amongst other elements, wherein fluid enters the first and second pump chamber when its respective pump applies negative pressure to the first pump chamber membrane and the second pump chamber membrane, as stated in current independent claim 16.

Jorgensen discloses an expressor chamber 23, preferably positioned in the cassette 1 adjacent to the portion of the cassette 1 that holds the whole blood bag and blood compartment bags. See Jorgensen, col. 8, lines 46-51. When the cassette 1 is closed, and the device is used, expressing fluid or gas is pumped into the expressor chamber 23 for purpose of expanding the flexible membrane 11, which pressurizes one or more of the blood component bags. See Jorgensen col. 8, lines 61-65. As expressing fluid is pumped into the expressor chamber 23, the flexible membrane 11 expands against, for example, the whole blood bag 6, thereby squeezing and reducing the volume of the bag 6 and forcing material out of the bag 6. See Jorgensen, col. 9, lines 1-5.

No where does Jorgensen disclose or teach filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane. In fact, as the Examiner compares the expressor chamber 23 to the first pump chamber, Jorgensen clearly states that expressing fluid is pumped into the expressor chamber to expand the flexible membrane, which then expands against the whole blood bag, squeezing and forcing material out of the bag. Thus, positive pressure is exerted on the blood bag to force material out. Jorgensen does not disclose filling the pump chamber when its respective pump applies negative pressure to the first pump chamber membrane.

For these reasons and others, some of which are discussed above, Applicants have shown that claim 16 is allowable over Jorgensen, and thus, requests that the Examiner withdraw the rejection of claims over 35 USC §103(a). As claims 19-22 are dependent claims of an allowable base claim, Applicants additionally request the Examiner withdraw the rejection of claims 19-22 over 35 USC §103(a).

15. The Office action rejects claim 17 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen"). Applicants respectfully disagree. For at least the same reasons as stated above with respect to the rejection of claims 16 and 19-22, Applicants respectfully request the Examiner withdraw the rejection of claim 10 over 35 USC §103(a).

16. The Office action rejects claim 18 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen") in view of Lolachi U.S. 4,056,224 ("Lolachi"). Applicants respectfully disagree. As discussed above, Jorgensen does not teach all the limitations except the four-port coupling inserted in a distribution tubing, as stated by the Examiner. See Office action, page 9, paragraph 16. Jorgensen nor Lolachi teach, either alone or as modified as suggested by the Examiner, amongst other elements, wherein fluid enters the first and second pump chamber when its respective pump applies negative pressure to the first pump chamber membrane and the second pump chamber membrane. Thus, Applicants respectfully request the Examiner withdraw the rejection of claim 15 over 35 USC §103(a).

For at least the same reasons as stated above with respect to the rejection of claims 16 and 19-22, Applicants respectfully request the Examiner withdraw the rejection of claim 10 over 35 USC §103(a).

17. The Office action rejects claim 25 under 35 USC §103(a) as being unpatentable over U.S. Patent No. 6,605,223 issued to Jorgensen et al. ("Jorgensen") in view of Lolachi U.S. 4,056,224 ("Lolachi"). Jorgensen does not teach all the limitations except the four-port coupling inserted in a distribution tubing, as stated by the Examiner. See Office action, page 10, paragraph 17. Specifically, amongst other elements, Jorgensen fails to disclose or teach wherein fluid enters the first pump chamber when its respective pump applies negative pressure to the first pump chamber membrane. Thus, Applicants respectfully request the Examiner withdraw the rejection of claim 25 over 35 USC §103(a).

New Claims

Claims 26-27 are introduced by amendment herein. Claims 26-27 do not contain new matter. Applicants respectfully assert that claims 26 and 27 are also allowable over the cited art for at least the same reasons as discussed above with respect to claims 1, 9, 16 and 23.

Conclusion

For the foregoing reasons all of the claims of the present invention are patentable over the art of record. It is believed that all of the claim rejections have been addressed and that the application is now in condition for allowance. Reconsideration of the claims and issuance of a notice of allowance are respectfully requested. If any matter arises which may expedite issuance of a notice of allowance, the Examiner is requested to call the undersigned, at the telephone number given below.

Applicants hereby petition for a three-month extension of time. Applicants request that the associated extension fee be charged to Deposit Account No. 50-4383. Applicants also request that any other fee required for timely consideration of this application be charged to Deposit Account No. 50-4383.

Date: June 30, 2008

Respectfully submitted,

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